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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/803,584

03/18/2004

Philip Jeffrey Anthony

GPA1.PAU.11A

9869

7590

08/24/2006

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EXAMINER

NI, SUHAN

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/803,584

Applicant(s)

ANTHONY ET AL.

Examiner

Suhan Ni

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/669,308.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/18/04, 7/26/04</u> . | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

1. This communication is responsive to the preliminary amendment application filed on 03/18/2004.
2. The Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group **Art Unit 2615**.

***Drawings***

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “**a substantially W-like shape**” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement of drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

5. Claims 23-24 are objected to because of the following informalities:

Regarding claim 23, the limitation of “**and in the first frequency range**” in lines 3-4 is vague since it is not clear what the limitation is.

Regarding claim 24, the limitation of “**a substantially W-like shape**” in line 2 is indefinite since it is not clear what it refers to.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112, 1<sup>st</sup> Paragraph***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 24 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The feature of “a substantially W-like shape” is not clearly supported by specification.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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7. Claims 21-23 and 26-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Jones (U.S. Pat. - 6,647,122).

Regarding claims 21-22, 26-28, Jones discloses a compound loudspeaker, comprising: a first diaphragm (27, 101) having an first coil (36) thereon; a second diaphragm (21, 104) having a second coil (24) thereon formed on a periphery of the first diaphragm; a first seat (19-20, or Fig. 2) having a first annular wall (20) extending therefrom disposed coaxially with respect to a first magnet structure (17, or Fig. 2), said first wall and said first magnet defining an annular opening to allow said second coil to be moveably suspended therein; and a second seat (28 or Fig. 2) having a second annular wall extending therefrom and encircling a second magnet structure (29 or Fig. 2) having a flat structure, said second wall and said second magnet defining an annular gap (31) to allow said first coil to be moveably suspended therein as claimed.

Regarding claim 23, Jones further discloses the compound loudspeaker, wherein the first diaphragm generates sound waves in a first frequency range (high); and the second diaphragm generates sound waves in a second frequency range (low).

Regarding claims 29 and 32, Jones further discloses the compound loudspeaker, wherein no baffle is disposed intermediate the first and second diaphragm (Fig. 2).

Regarding claim 30, Jones further discloses the compound loudspeaker, wherein the first and second diaphragms define a generally continuous vibrating surface having a common acoustic center (Figs. 1-2).

Regarding claim 31, Jones further discloses the compound loudspeaker, wherein directivity of the sound from the first and second diaphragms is defined substantially only by the first and second diaphragms (Figs. 1-2) as claimed.

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8. Claims 22 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Esposto (U.S. Pat. - 5,339,286).

Regarding claim 22, Esposto discloses a compound loudspeaker, comprising: a first diaphragm (11-12); and a second diaphragm (5) formed on a periphery of said first diaphragm.

Regarding claim 25, Esposto further discloses the compound loudspeaker, wherein the first diaphragm includes a dome portion (11) and an annular waveguide (12).

9. Claims 22 and 28-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Sotome (U.S. Pat. - 3,665,124).

Regarding claims 22 and 28, Sotome discloses a compound loudspeaker, comprising: a first diaphragm (13); and a second diaphragm (12) formed on a periphery of said first diaphragm as claimed.

Regarding claims 29 and 32, Sotome further discloses the compound loudspeaker, wherein no baffle is disposed intermediate the first and second diaphragm (Fig. 2).

Regarding claim 30, Sotome further discloses the compound loudspeaker, wherein the first and second diaphragms define a generally continuous vibrating surface having a common acoustic center (Figs. 2 and 4).

Regarding claim 31, Sotome further discloses the compound loudspeaker, wherein directivity of the sound from the first and second diaphragms is defined substantially only by the first and second diaphragms (Figs. 2 and 4) as claimed.

Regarding claim 33, Sotome further discloses the compound loudspeaker, wherein the first and second diaphragms define a generally continuous curve (figs. 2 and 4).

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***Conclusion***

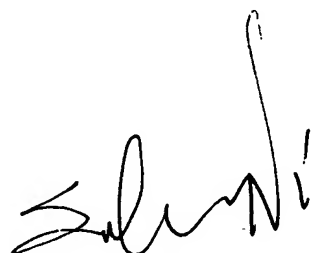
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(571)-272-7505**, and the number for fax machine is **(571)-273-7505**. The examiner can normally be reached on Monday through Thursday from 10:00 am to 8:00 pm. If it is necessary, the examiner's supervisor, **Sinh N. Tran**, can be reached at **(571)-272-7564**.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

13. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(571)-272-2600**, or please see <http://www.uspto.gov/web/info/2600>.

August 19, 2006

  
**SUHAN NI**  
**PRIMARY EXAMINER**